

APPARATUS AND METHOD FOR ELECTROCHEMICAL CELL COMPONENTS

ABSTRACT

A component for an electrochemical cell comprises a thermally and electrically
5 conductive core with an active area substantially covered by an electrically and thermally
conductive polymeric composite, wherein the conductive polymeric composite is adhered to the
core by an adhesion promoter. The electrically conductive polymeric composite preferably
comprises a thermosetting polybutadiene- or polyisoprene-based resin system and an electrically
conductive filler. The component is resistant to chemical attack and hydrolysis, and has
10 excellent mechanical strength and toughness. Components may be manufactured having a
volume resistivity of about 0.500 ohm-cm or less and a thermal conductivity of at least about 5
watts/meter °K,. In addition, the component is economical to produce due to inexpensive
starting materials as well as the use of conventional processing equipment.